

§Appl. No. 10/017,393
Amdt. dated October 22, 2004
Reply to Office Action of, July 27, 2004

Listing of Claims:

Claim 1 (Previously Presented) An isolated human H2R polynucleotide which codes without interruption for an amino acid sequence set forth in SEQ ID NO 2, or a complete complement thereto.

Claim 2 (Currently Amended) An isolated human H2R polynucleotide comprising, a polynucleotide sequence having 95% or more sequence identity along the entire length of the polynucleotide sequence set forth in SEQ ID NO 1 and which codes without interruption for H2R, or a complete complement thereto, wherein said polynucleotide hybridizes under high stringency conditions comprising 5X SSC, 0.5% SDS, 100 µg/ml denatured salmon sperm DNA and 50% formamide, at 42°C to the complete complement of the sequence set forth in SEQ ID NO:1, and wherein said polynucleotide codes for a polypeptide that, ~~has H2 receptor activity upon activation by histamine, leads to the accumulation of cAMP.~~

Claim 3 (Previously Presented) An isolated H2R polynucleotide, comprising: a polynucleotide coding for amino acids 360-422 of SEQ ID NO 2, specific fragments thereof which hybridize specifically under high stringent conditions to the polynucleotide sequence from nucleotide positions 1180-1368 as set forth in SEQ ID NO:1, or complete complements thereto.

Claim 4 (Previously Presented) An isolated H2R polynucleotide of claim 3, consisting of: a polynucleotide coding for amino acids 360-422 of SEQ ID NO 2, or a complete complement thereto.

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Claim 5 (Previously Presented) An isolated H2R polynucleotide of claim 3, wherein said fragment is effective in a polymerase chain reaction.

Claim 6 (Previously Presented) An isolated human H2R polypeptide coded for a polynucleotide of claim 1, comprising: the amino acid sequence set forth in SEQ ID NO 2.

Claim 7 (Previously Presented) An isolated human H2R polypeptide coded for a polynucleotide of claim 2, comprising: an amino acid sequence having 95% or more sequence identity to the amino acid sequence set forth in SEQ ID NO 2.

Claim 8 (Previously Presented) An isolated H2R polypeptide coded for by a polynucleotide of claim 3,
coding for amino acids 360-422 of SEQ ID NO 2 or specific fragments thereof.

Claim 9 (Previously Presented) An isolated H2R polypeptide of claim 8, consisting of:
amino acids 360-422 of SEQ ID NO 2.

Claim 10 (Previously Presented) A method for identifying an agent that modulates the biological activity of a human H2R in mammalian cells expressing a human H2R of claim 2, comprising:

contacting mammalian cells expressing human H2R with a test agent under conditions effective for said test agent to modulate the biological activity of said human H2R, wherein said cells are transformed with a polynucleotide construct comprising an expressible human H2R polynucleotide, whereby said H2R expression is achieved, and
determining whether said test agent modulates said H2R.

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Claim 11 (Previously Presented) A method of claim 10, wherein said agent is a polynucleotide coding for a peptide selected from amino acids 360-422 of SEQ ID NO 2.

Claim 12 (Previously Presented) A method of claim 10, wherein said human H2R has the amino acid sequence set forth in SEQ ID NO 2.

Claim 13 (Currently Amended) A An isolated transformed mammalian cell comprising:
a polynucleotide construct comprising a human H2R polynucleotide of claim 2
operatively linked to an expression control sequence.

Claim 14 (Currently Amended) A An isolated transformed cell of claim 13, wherein said human H2R polynucleotide has the sequence set forth in SEQ ID 1.

Claim 15 (Currently Amended) A An isolated transformed cell of claim 13, wherein said human H2R polynucleotide has the amino acid sequence set forth in SEQ ID 2.

Claim 16 (Currently Amended) A An isolated transformed cell of claim 13, wherein said expressible human H2R polynucleotide is integrated into the chromosome of said cell.

Claim 17 (Previously Presented) An isolated antibody which is specific for a polypeptide having amino acids 360-422 of SEQ ID NO 2, or specific fragments thereof.

Claim 18 (Previously Presented) An isolated human H2R polynucleotide of claim 1, comprising the polynucleotide sequence from nucleotide positions 103-1368 as set forth in SEQ ID NO:1, or a complete complement thereto.

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Claim 19 (Previously Presented) An isolated H2R polynucleotide of claim 3, wherein said polynucleotide comprises the polynucleotide sequence from nucleotide positions 1180-1368 as set forth in SEQ ID NO:1.